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Case Report
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Case Report of Pineal Apoplexy in a Patient with Primary Headache Syndrome: To Treat or not to Treat

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Abstract

Background: Pineal cysts are mostly clinically benign and discovered as incidental findings although some can become symptomatic in form of apoplexy which is very rare. Rarely pineal apoplexy will be a silent epiphenomenon and a neuroimaging finding only as was in our case.

Case Report: We hereby report the case of a 28 years old male with past h/o episodic paroxysmal hemicrania showing pineal cyst with intracystic hemorrhagic fluid level on neuroimaging suggestive of apoplexy. Patient was managed conservatively with good response to medications.

Discussion: Pineal cyst apoplexy is rare and it being clinically silent is even rarer. Also it is difficult to suspect it in previously known patients of primary headache disorder in whom seasonal relapses are known to occur and may pose some therapeutic dilemmas when discovered on neuroimaging.

Conclusion: Pineal cyst apoplexy can be a radiological finding only and treatment decision in such cases should be taken by clinical judgment.

Keywords: Pineal apoplexy; Episodic paroxysmal hemicrania

Introduction

Asymptomatic pineal cysts are common, being found in about 40% of routine autopsies [1,2]. By contrast, only about 74 symptomatic cases have been reported [2]. Symptomatic pineal cysts mainly occur in females and in young adults [3]. We describe a 29-year-old man with clinical presentation of episodic paroxysmal hemicrania showing radiological appearance of pineal cyst apoplexy and managed well with symptomatic treatment for paroxysmal hemicranias.

Case Presentation

A 29 years old male came with history of right hemicranial headache since 4 days. Headache was moderate to severe in intensity. There was history of 4 to 5 headache episodes in a day each episode lasting for 45 min with maximum intensity achieved within 15 min. Each episode was accompanied by tearing from ipsilateral eye and nasal stuffiness. There was occasional history of nausea, photo and phonophobia with headache episodes.

Patient also gave past h/o similar headaches episodes since last 5 years once every 12 to 18 months. During each attack the headache would last for approximately 4 weeks with similar presentation except that occasionally it could be on left side.

During the previous attacks he was given symptomatic treatment with few prescriptions of migraine prophylaxis however no neuroimaging was done in the past. His neurological and systemic examination was normal including a normal fundus oculi. We planned for neuroimaging despite clinically considering the possibility of episodic paroxysmal hemicrania for ruling out the secondary causes of headache.

MRI was suggestive of Well-defined oval shaped cystic pineal lesion (15 mm × 12 mm × 10 mm), which was T2 hyperintense/T1 isointense and was not suppressed on FLAIR (Figure 1). Intracystic T2 hypointense fluid level was seen with blooming on SWI suggestive of hemorrhage. Thin T2 hypointense signal was seen along wall of lesion with blooming on SWI likely suggestive of calcification (Figure 2).

Lesion was causing mild indentation on superior portion of tectal plate however without any hydrocephalus (Figure 3). Neurosurgeon gave the opinion to repeat MRI after 3 months to see the interval changes. Meanwhile patient was started on indomethacin 150 mg per day with which

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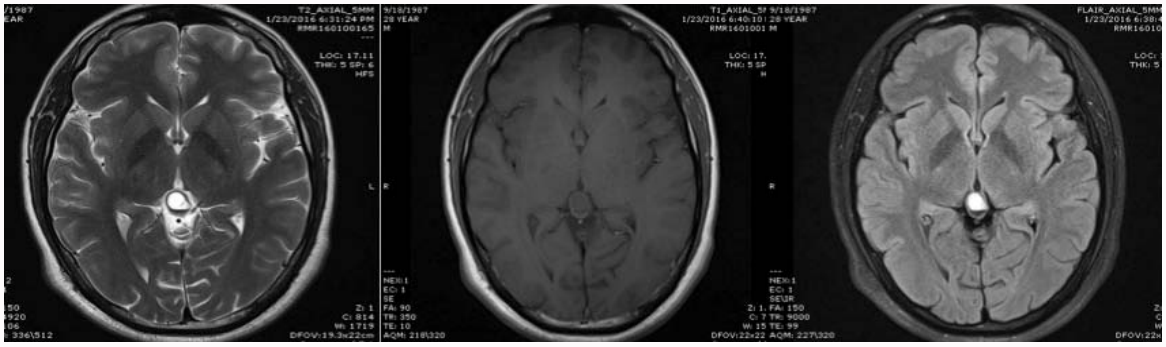

Figure 1: Well-defined oval shaped cystic pineal lesion (15 mm × 12 mm × 10 mm, AP × ML × CC) is seen which is T1 isointense/T2 hyperintense and is not suppressed on FLAIR.

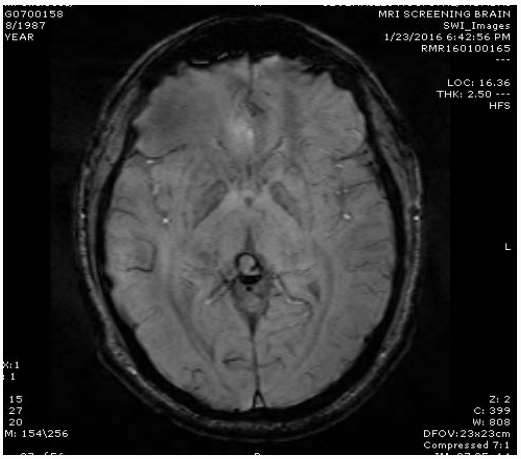

Figure 2: Intracystic T2 hypointense fluid level is seen with blooming on SWI suggestive of hemorrhage. Thin T2 hypointense signal is seen along wall of lesion with blooming on SWI likely suggestive of calcification.

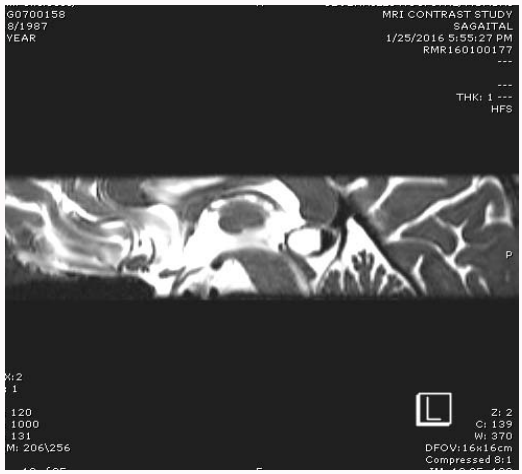

Figure 3: Lesion is causing mild indentation on superior portion of tectal plate without hydrocephalus.

he responded over 4 to 5 days and gradually became headache free. Patient was well explained about symptoms of apoplexy and kept under regular follow up with advice to repeat MRI after 3 months.

Discussion

Pineal cysts are regarded as clinically benign entities and are usually discovered incidentally. Between 21% and 41% of autopsy specimens have shown evidence of either macroscopic or microscopic cysts [1,4]. Although cyst size can vary greatly, many MRI studies have reported that the size usually remains stable throughout its natural history [2,5].

Symptoms generally manifest as a result of increased intra- cranial pressure secondary to an obstructive hydrocephalus [6] and/or gaze paresis resulting from compression of the tectal midbrain. Wisoff and Epstein [3] identified three clinical presentations of symptomatic pineal cysts: 1) paroxysmal headache with gaze paresis; 2) chronic headache, gaze paresis, papilledema, and hydrocephalus; and 3) pineal apoplexy with acute hydrocephalus. Of these three, apoplexy is the least common [7].

Owing to the rarity of these cases, very little is known about their typical presentation and management. This is important because pineal cyst apoplexy can be a medical emergency.

Conclusion

Asymptomatic pineal cyst discovered in autopsy or routine neuroimaging is a well known phenomenon but to our knowledge no case of asymptomatic/clinically silent pineal cyst apoplexy has been reported till now. Treatment decision in such cases is challenging. In our case clinical diagnosis of episodic paroxysmal hemicranias and response to treatment of primary headache disorder was the only clue to decision making about not to intervene and follow up with neuroimaging.

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